

ABSTRACT

A method includes stalling a call to a heap allocation function originating from a request by an application for a block of heap buffer, predicting a block of the heap buffer to fulfill the request, and determining if a forward link (F-link) and a backward link (B-link) of the predicted block are addresses within a heap segment associated with the predicted block. If a determination is made that the F-link or the B-link point outside the associated heap segment, e.g., have been overwritten by a heap buffer overflow attack, corrective action is taken to correct the stray F-link or B-link. After the corrective action is taken, the heap allocation function call is released and the block of heap buffer is allocated. In this manner, a heap buffer overflow attack is defeated.